

GIS NEWS AND INFORMATION

December 1994 (No. 2)

Editorial Note: Wishing everyone a very happy GIS New Year!

Upcoming GIS Public Health Conferences

1. The 1995 CDC and ATSDR Symposium on Statistical Methods "Small Area Statistics in Public Health: Design, Analysis, Graphic and Spatial Methods" will be held at the Westin Peachtree Plaza hotel, Atlanta, January 25-26 with a GIS Short Course offered on January 24. For more information, please contact **Don Betts** (404) 639-0080.

2. The "International Symposium on Computer Mapping in Epidemiology and Environmental Health" will be held at the Hyatt Regency Downtown, Tampa, February 13-15. For more information, please contact Robert T. Aangeenbrug (813) 974-4292 or 974-2386.

Member Communication

Good News: Dr. Satcher is GIS informed.

1. On April 29, 1994, **Charles M. Wood, III**, Radiation Studies Branch, NCEH, had a brief discussion with Dr. Satcher and was asked to prepare cost estimates for a GIS Center which might support all of CDC. Charles initially suggests the appointment of a Steering Committee to draft a detailed implementation plan. For a full reading of his memo to Dr. Satcher, please contact Charles. As a postnote, Charles also recommends the following:

"We don't want to attempt to create one organization that does all spatial analysis projects for the entire agency. An expert or two who could create macros, data entry screens, or

whatever to help various branches start their own projects is the way to go.

We can make our own expert(s), but someone has to donate the FTE. GIS development takes a lot of time. A contractor is acceptable, but an employee is better. Data is more expensive than hardware and software. One central office that procures data for the entire agency to use, and advertises their services, would be cost effective."

2. On November 8, **Frank Richards**, Division of Parasitic Diseases, NCID, took advantage of Dr. Satcher's "five minute open door policy" to discuss GIS as an important new CDC direction in technology for disease control and prevention. Frank discussed his own work in GIS, which he initiated in Guatemala in 1988, and which has since focused on applications in developing countries. He stressed the need to: 1) actively identify and obtain georeferenced datasets from other sectors, 2) provide training to CDC professionals in a range of GIS and image processing software so that they might begin to "think and work spatially;" and 3) promote CDC applications and demonstration projects. Dr. Satcher was interested and receptive to the suggestion that GIS warranted further exploration at CDC; he mentioned that GIS had a role in the NCID "Addressing Emerging Infectious Diseases Threats" plan.

Other Member News:

3. **Chester (Chet) Moore**, VBI, NCID, reports: I just received a FAX from Roger Mitchell at Earth Satellite Corp., containing a page from the Nov. 14-20 issue of Space News. Don't know if you have access to this publication, but looks like a trade newsletter.

The article describes a \$600,000 congressional appropriation to create the Center for Health Applications of Aerospace Related Technology (CHAART). The article further states that CHAART is working with NIAID/NIH to "determine which of the Institute's ongoing disease studies would benefit from the use of satellite technology."

Has CDC/ATSDR been involved in any way in working with CHAART? If anyone has contacted these people, I would like to know what possibilities, if any, there may be for linking with them. For example, this might be an avenue for interagency cooperation under the infrastructure funding that has become available in CDC.

Editor: In subsequent communication, Chet notes that Frank Richards raises some good points on the issue of MOAs with NASA. Frank also points out '...that the CDC document "Addressing Emerging Infectious Disease Threats: A Prevention Strategy for the United States" promotes the use of GIS and remote sensing (page 20, item 6 and 7). The strategy stresses the importance of assessing the utility of these tools to model and/or monitor environmental changes that might affect the emergence of infectious diseases.'

For more information on this increasingly important GIS topic, please contact Chet and Frank.

4. **Morris L. Maslia**, EICB, ATSDR, reports that the Exposure-Dose Reconstruction Project has purchased the 1993 5-digit ZIP code boundary file for the U.S. These are intended to be used as an area database with Caliper Corporation GisPlus or Transcad software but the ZIP data can be exported to ASCII, comma delimited files for other uses. Please contact Morris who is willing to discuss and review your ZIP code needs.

5. **Robert J. Roscoe**, SHE, NIOSH, writes: I am investigating programs for geographic data analysis. I am aware of three--Atlas Pro, Master

Map and SAS/GRAPH. What do GIS members think of these and what other programs are out there. I need to find ways to display and analyze national data collected at the county or census tract level. I'm interested in information on both PC and mainframe packages. Please call Bob and discuss your recommendations.

6. **John R. Odencrantz**, RDS, NIOSH, writes: A while ago, some co-workers and I were looking at the geographic distribution of lung cancer throughout the United States. Since our concern is occupational diseases, everyone was considering it with regard to the distribution of certain industries, eg, petrochemical. But I think it would be informative to look at the distribution of smoking throughout the country as well. Since cigarettes are taxed, I would assume that there is information that would bear on cigarette consumption as a geographic variable. Do you have any idea where I might start looking for something like that?

Linda W. Pickle, ORM, NCHS replies: I used the HIS files which included a smoking supplement to look at this under an American Cancer Society grant while I was at Georgetown. The problem is getting smoking data that is old enough to account for the presumed lag time between exposure and lung cancer. BRFSS does have state data on the simplest smoke/don't smoke question, but it doesn't go back more than a few years for all states. **Editor:** Perhaps **Ki Moon Bang** and **Jay H. Kim** can also advise. Please contact John if anyone else has ideas.

7. Received from **Frank H. Millard** (see address below): Currently, I am not associated with a GIS project. However, I have recently completed a master's degree in applied medical anthropology at Georgia State University. My thesis research included very minimalist GIS. I used ATLAS GIS to map, at the county level, infant mortality data (e.g., rate, live births and deaths) and socioeconomic data (e.g., median household income, education level, etc.) for White and African Americans in Georgia. Socioeconomic

data was for 1991 and infant mortality data was aggregated from 1979 to 1991. I used both choroplethic and proportional symbol maps. I used the maps to create an "atlas" of infant mortality in Georgia, and to illustrate that socioeconomic status does not affect within population infant mortality in Georgia. I am eager to continue my research at lower levels of analysis (e.g., census tract), but infant mortality data at lower levels is not available in all Georgia counties. Another problem is that environmental data, such as surface and ground water quality and proximity to hazardous waste, is difficult to obtain at census tract levels. A primary GIS function for infant mortality research is to overlay environmental data with socioeconomic status and infant mortality, at the census tract or lower levels of analysis. If you know of anyone who is exploring such research, please let me know. I can be contacted on WONDER or as antfhmx@gsusgi2.gsu.edu. I can be contacted by voice at (404)972-8740, and standard mail at 3997 Jami Lane, Lithonia, GA 30058.

8. **Chris Kochtitzky**, OPEA, ATSDR reports: For those who have Internet access, there is a GIS NewsGroup on the Internet accessible at: news:comp.infosystems.gis.

9. **John Mann**, OAA, ATSDR, writes: We are interested in promoting electronic transfer of data for use in GIS analyses. We have had some success in transferring environmental data electronically but, as far as I know, have not transferred health data in same manner. Therefore, we are interested in working with you and other CDC GIS folks in discussing and developing standard protocols for electronic transfer of health data. Any interest and thoughts on the subject? Please contact John with your ideas.

Related to the above, **Mark Evans**, OAA, ATSDR, writes: '... it may be a good idea to let the group know what is happening with ATSDR's Federal Facility Information Management System (FFIMS). FFIMS is an ATSDR Division of Health

Assessment and Consultation initiative. We have developed an extensive relational database for managing environmental monitoring data, health outcome data, and community health concerns related to public health assessments. We have also developed windows-type front ends for data evaluation, and are in the process of implementing ArcView as a query-visualization tool. We are developing tools related to several pilot projects and have acquired great experience in what not to do with regard to electronic data transfer.' For details, contact Mark.

11. **Rick Gillig**, OAA, ATSDR, '...provides administrative oversight of a cooperative agreement program involving 22 state health departments. The major thrust of this program is to assess the public health impact of hazardous waste sites. These states use GIS for the spatial analysis of environmental monitoring results, health outcome data, and demographic characteristics. In terms of GIS application in this area of environmental health, we have such a long way to go. I see the GIS group as helping provide information on applications that may steer our efforts.' For details, contact Rick.

12. **Linda W. Pickle**, ORM, NCHS, shares the following received from Brandon Plewe, GeoWeb: 'Have you looked at our page (<http://wings.buffalo.edu/geoweb/>)? Currently the index is only in prototype stage, and will probably go no further, as the main leadership for this cause is being handled by the NSDI Spatial Data Clearinghouse. The details for how this will be handled haven't yet been worked out.

The prototype interface (with an index of data on spectrum.xerox.com) can be found at <http://wings.buffalo.edu/cgi/mapbrowse>. You can move around the map, but you'll get some results if you use the starting map, scroll down to the bottom, and select the "Geoweb Database--spectrum.xerox.com DEM/DLG archive" link. Then you'll get a list of the datasets in that area.

Census data is online at [ftp.cdrom.lbl.gov](ftp://cdrom.lbl.gov), which

contains all the raw TIGER and STF data. An interactive tool for accessing individual STF tables is at http://cedr.lbl.gov/cdrom/doc/lookup_doc.html.

Editor: For more information, contact Brandon at plewe@acsu.buffalo.edu.

P.S. I thank each of you who took the time to respond to my survey of CDC and ATSDR GIS project activities. I hope to have a summary to you at the Short Course and then make it available through our **GIS NEWS AND INFORMATION** communication.

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